

**Notice of Allowability**

Application No.

10/687,286

Examiner

Cheryl Lewis

Applicant(s)

BESTGEN ET AL.

Art Unit

2167

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address--

All claims being allowable, PROSECUTION ON THE MERITS IS (OR REMAINS) CLOSED in this application. If not included herewith (or previously mailed), a Notice of Allowance (PTOL-85) or other appropriate communication will be mailed in due course. **THIS NOTICE OF ALLOWABILITY IS NOT A GRANT OF PATENT RIGHTS.** This application is subject to withdrawal from issue at the initiative of the Office or upon petition by the applicant. See 37 CFR 1.313 and MPEP 1308.

1. ☒ This communication is responsive to the applicants' communication filed on July 19, 2006.
2. ☒ The allowed claim(s) is/are 1-29.
3. ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some\* c) ☐ None of the:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this national stage application from the International Bureau (PCT Rule 17.2(a)).

\* Certified copies not received: \_\_\_\_\_.

Applicant has THREE MONTHS FROM THE "MAILING DATE" of this communication to file a reply complying with the requirements noted below. Failure to timely comply will result in ABANDONMENT of this application.  
**THIS THREE-MONTH PERIOD IS NOT EXTENDABLE.**

4. ☐ A SUBSTITUTE OATH OR DECLARATION must be submitted. Note the attached EXAMINER'S AMENDMENT or NOTICE OF INFORMAL PATENT APPLICATION (PTO-152) which gives reason(s) why the oath or declaration is deficient.
5. ☐ CORRECTED DRAWINGS (as "replacement sheets") must be submitted.
- (a) ☐ including changes required by the Notice of Draftsperson's Patent Drawing Review (PTO-948) attached.
- 1) ☐ hereto or 2) ☐ to Paper No./Mail Date \_\_\_\_\_.
- (b) ☐ including changes required by the attached Examiner's Amendment / Comment or in the Office action of Paper No./Mail Date \_\_\_\_\_.
- Identifying indicia such as the application number (see 37 CFR 1.84(c)) should be written on the drawings in the front (not the back) of each sheet. Replacement sheet(s) should be labeled as such in the header according to 37 CFR 1.121(d).
6. ☐ DEPOSIT OF and/or INFORMATION about the deposit of BIOLOGICAL MATERIAL must be submitted. Note the attached Examiner's comment regarding REQUIREMENT FOR THE DEPOSIT OF BIOLOGICAL MATERIAL.

**Attachment(s)**

- |   |   |
|---|---|
| 1. <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)   | 5. <input type="checkbox"/> Notice of Informal Patent Application                     |
| 2. <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)  | 6. <input type="checkbox"/> Interview Summary (PTO-413),<br>Paper No./Mail Date _____ |
| 3. <input checked="" type="checkbox"/> Information Disclosure Statements (PTO/SB/08),<br>Paper No./Mail Date <u>February 22, 2005</u> | 7. <input checked="" type="checkbox"/> Examiner's Amendment/Comment                   |
| 4. <input type="checkbox"/> Examiner's Comment Regarding Requirement for Deposit<br>of Biological Material                            | 8. <input type="checkbox"/> Examiner's Statement of Reasons for Allowance             |
|   | 9. <input type="checkbox"/> Other _____   |

### DETAILED ACTION

1. Claims 1-29 are allowed.

### Drawings

2. The drawings filed on October 16, 2003 are accepted by the Examiner.

### EXAMINER'S AMENDMENT

3. An examiner's amendment to the record appears below. Should the changes and/or additions be unacceptable to applicant, an amendment may be filed as provided by 37 CFR 1.312. To ensure consideration of such an amendment, it **MUST** be submitted no later than the payment of the issue fee.

Authorization for this examiner's amendment was given in an interview with Scott Stinebruner on September 28, 2006.

4. Claims 1, 21, and 24 have been amended as follows:

Claim 1. (Currently Amended) A computer implemented method for optimizing a database query plan, comprising the steps of:

identifying a parent node that is a Join node, wherein said parent node has an original first child node and an original second child node, and wherein the parent node comprises a Join node that is selected from the group consisting of a Left Join node, a Right Join node, a Left Exception Join node and a Right Exception Join node;

changing said parent node to an Inner Join node;

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substituting a new node as a first child node of the Inner Join node; and  
moving the original first child node to be a child node of the new node.

21. (Currently Amended) A program product, comprising:

program code configured upon execution to perform the steps of:

identifying a parent node that is a Join node, wherein said parent node has an  
original first child node and an original second child node;

changing said parent node to an Inner Join node;

substituting a new node as a first child node of the Inner Join node;

and

moving the original first child node to be a child node of the new

node; and

a physical computer readable storage medium storing the program code.

24. (Currently Amended) A method performed by a computer executing program  
code resident on a computer-readable storage medium for creating at least a portion of  
a query plan for a Join of a first table and a second table, the method comprising the  
steps of:

generating Inner Join logic for the query plan, wherein the Inner Join logic joins  
the first table and a Fan-out node; and

generating Fan-out node logic for the query plan, wherein the Fan-out  
node logic accesses the second table according to a set of selection criteria; and  
executing the query plan.

### **REASONS FOR ALLOWANCE**

5. The following is a statement of reasons for the indication of allowable subject matter:

Applicants' response filed on July 19, 2006 overcomes the prior art rejection under 35 USC § 102(e) by Anonsen.

The prior art of record does not render obvious to one ordinarily skilled in the art at the time of applicant's invention nor anticipate the combination of claimed elements including 'identifying a parent node that is a Join node, wherein said parent node has an original first child node and an original second child node, and wherein the parent node comprises a Join node that is selected from the group consisting of a Left Join node, a Right Join node, a Left Exception Join node and a Right Exception Join node' as recited in independent claim 1.

As per claim 18, the prior art of record does not teach 'replace the Join node with an Inner Join node and a new node, wherein the Join node is selected from the group consisting of a Left Join node, a Right Join node, a Left Exception Join node and a Right Exception Join node'.

As per claim 21, the prior art of record does not teach 'wherein said parent node has an original first child node and an original second child node; changing said parent node to an Inner Join node'.

As per claim 24, the prior art of record does not teach 'generating Inner Join logic for the query plan, wherein the Inner Join logic joins the first table and a Fan-out node' and 'executing the query plan'.

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The remaining claims, 2-17, 19, 20, 22, 23, and 25-29 are dependent claims, thus these claims are patently distinct over the art of record for at least the above reasons.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

#### **NAME OF CONTACT**

6. Any inquiry concerning this communication or earlier communications from the examiner should be directed to Cheryl Lewis whose telephone number is (571) 272-4113. The examiner can normally be reached on 6:30-3:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Cottingham can be reached on (571) 272-7079. The fax phone number for the organization where this application or proceeding is assigned is (571) 273-8300.

(571) 273-4113 (Use this FAX #, only after approval by Examiner, for "INFORMAL" or "DRAFT" communication. Examiners may request that a formal paper/amendment be faxed directly to them on occasions.).

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist/ Technology Center (571) 272-2100.

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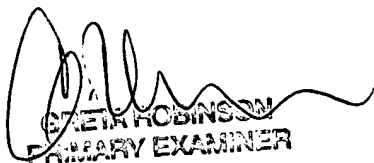
Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only.

For more information about the PAIR system, see <http://pair-direct.uspto.gov>.

Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).



Cheryl Lewis  
Patent Examiner  
September 29, 2006



CHETIA ROBINSON  
PRIMARY EXAMINER